

**An explanation for the rise in  $T_c$  in the Tl- and Bi-based high temperature  
superconductors**

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Using the plasmon exchange model for the high  $T_c$  superconductor, we show that the  $T_c$  rises with an increase in the number of CuO layers per unit cell, which is in agreement with recent observations in the Tl- and Bi-based compounds. Our calculation also suggests that the sample will become superconducting in successive stages and that there is a saturation effect, i.e. that  $T_c$  cannot be raised indefinitely by increasing the number of CuO layers.